DRIZORO® Construction Products

WATMAT® FLUID

EPD® CE
ENVIRONMENTAL PRODUCT DECLARATION

QUICK-SETTING FLUID MORTAR FOR LEVELLING MANHOLE COVERS

DESCRIPTION

WATMAT® FLUID is a one-component, quick-setting fluid mortar based on special cements, silica aggregates and admixtures, with excellent mechanical properties and fluidity. It is designed for levelling manhole covers in new construction and repairing concrete pavements where a rapid return to service is required.

APPLICATION FIELDS

- For resetting and levelling manhole covers on streets and public roads, concrete factory floors, etc.
- Rapid filling of cavities and voids by direct pouring.
- Urgent repairs of floors and joint edges.

ADVANTAGES

- Its short setting time, less than 2 hours, allows a fast return to service for the fixed elements.
- High early and ultimate mechanical strengths.
- High impact and abrasion resistance.
- Highly fluid, easily filling the entire space to be filled.
- High cohesion of the fresh mortar without segregation or bleeding.
- Very good adhesion to surfaces, it becomes structural part of the substrate, and it withstands to repeated loads.
- One-component. Only water is required for mixing.
- Contains no chlorides or metal particles, it is non-corrosive for steel surfaces.
- Resistant to water, oil and grease: very low water absorption. Its grey colour is similar to that of concrete.
- Environmentally friendly: cement-based, non-toxic and solvent-free product.

APPLICATION INSTRUCTIONS

Substrate preparation

Weak and deteriorated concrete must be removed until a structurally sound substrate is reached. Use mechanical, abrasive or percussion methods, sandblasting or high-pressure water jetting, cutting back the edges of the repair perpendicular to the surface to a minimum depth of 1 cm.

The surface must be clean and free of loose or poorly bonded material, surface laitance, paints, efflorescence, grease, form release agents, dust, gypsum or any other substances that may affect adhesion. Use sandblasting or high-pressure water jetting.

Once substrate has been prepared, dampen thoroughly the entire surface to be coated with clean water, avoiding the formation of puddles. If it gets dry, proceed to saturate with water again.

Mixing

A 25 kg bag of ***WATMAT® FLUID*** requires 4,0 litres (16 % by weight) of clean water, depending on ambient conditions and the desired consistency. Pour part of the required amount of water into a clean container and gradually add ***WATMAT® FLUID***. Finally, add the remaining water and mix manually or preferably using a low-speed electric drill (400-600 rpm) fitted with a mixing disc for approximately 2-3 minutes, until a homogeneous, lump-free and air bubble-free mortar of fluid consistency is obtained.

Do not mix for prolonged period nor use high-speed mixer, which may introduce air bubble. Allow the mixture to rest 1 minute so that any introduced air bubbles during mixing can disappear, and finally

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remix briefly before applying. If product is mixed by hand, increase the mixing time until all lumps disappear.
Do not use more water than the recommended ratio. Mix only the amount of ***WATMAT®FLUID*** that can be poured in about 15 minutes. After this time, mortar will have started its setting and will no longer be workable.

Application
WATMAT® FLUID is applied by pouring directly from the mixer by gravity, as continuously as possible and, where possible, progressing from the same side to avoid the formation of cold joints and minimise the risk of air entrapment. If necessary, manual vibration may help fill the required volume. Avoid excessive vibration, as it may cause segregation of the mixture and air entrapment.

Application conditions
Do not apply with substrate and/or ambient temperature is at or below 5°C, or when temperatures are expected to fall below 5°C within 24 h after application. Do not apply to frozen or frost-covered surfaces.
For applications at high temperatures, in strong winds and/or at low relative humidity, thoroughly dampen the substrate with plenty of water. Avoid direct sunlight exposure in extremely hot conditions.

Curing
Under conditions of high temperatures, wind, low relative humidity and/or direct sunlight exposure, prevent rapid drying of ***WATMAT® FLUID*** by maintaining its moisture for at least 1 hour after application, using plastic sheeting, damp burlap or spraying the mortar surface with a fine mist of water without washing out the mortar.

Cleaning
All mixing and application tools, and equipment must be cleaned immediately with water after use. Once hardened, the product can only be removed by mechanical means.

CONSUMPTION

The estimated consumption for ***WATMAT® FLUID*** is 1,8 kg/m^2·mm, with a thickness from 5 mm to 50 mm per layer. A 25 kg bag fills a volume of approximately 12,5-13,75 litres (0,50-0,55 litres per 1,0 kg of product).

Consumption may vary depending on the texture, porosity and condition of the substrate, as well as the application method. Carry out an on-site test to determine the actual consumption.

IMPORTANT INDICATIONS

- Use the recommended mixing ratios.
- Do not use leftovers from previous batches to prepare new mixes. Use clean water only.
- To restore the workability, remix the mortar but never add more water.
- Observe the recommended thickness per application.
- Setting times are measured at 25°C. Lower temperatures and/or higher R.H. values will increase these times.
- With low temperatures keep the product in a warm place and use clean warm water to accelerate the setting time.
- With hot temperatures keep the product in a cool place and use fresh clean water for the mix. Mix small batches of material and apply immediately.
- Do not use in contact with pure water, acidic water and/or water containing aggressive carbon dioxide. In the presence of sulphate-containing water or soils, such as groundwater, seawater or wastewater, use the sulphate-resistant version ***WATMAT® FLUID ANTISULFAT***.
- For other uses not specified on this Technical Bulletin or further information, consult the Technical Department.

PACKAGING

WATMAT® FLUID is supplied in 25 kg bags. It is available in standard grey colour.

STORAGE

Twelve months in its unopened and undamaged original sealed packaging. Store in a cool, dry and covered place, protected from moisture, freezing and away from direct exposure to sunlight at temperatures above 5°C.

SAFETY AND HEALTH

WATMAT® FLUID is not a toxic product but is an abrasive composition. Avoid direct contact with skin and eyes, and breathing dust. Use rubber gloves and safety goggles when handling, mixing and applying the product. In case of contact with skin, wash affected area with soap and water. In case of contact with eyes, rinse immediately thoroughly with clean water but do not rub. If the irritation persists, seek medical assistance.

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Consult the Safety Data Sheet for ***WATMAT® FLUID.*** Disposal of the product and its packaging should be carried out according to the current official regulations and it is the responsibility of the final user of the product.

TECHNICAL DATA

Product characteristics		
CE marking, EN 998-1 *Description: Industrial mortar for rendering and plastering for general use. GP* *Intended uses: Industrial mortar for general use.*		
General appearance and colour	Grey powder	
Maximum aggregate size, (mm)	< 0,8	
Powder density, (g/cm^3)	1,35 ± 0,10	
Fresh mortar density, (g/cm^3)	2,15 ± 0,10	
Dry hardened mortar density, (g/cm^3)	1,35 ± 0,10	
Mixing water, (%, by weight)	16	
Segregation	No	
Application and curing conditions		
Minimum application temperature for substrate and ambient, (ºC)	> 5	
Pot life at 25°C & 50 % R.H., (min)	About 15	
Initial / Final setting time at 25°C & 50 % R.H., (min)	30 - 40 / 45 - 50	
Cured product characteristics		
Mechanical strengths, (MPa)	Flexural strength	Compressive strength
- 1 hour	2,5	9,0
- 24 hours	4,5	30
- 7 days	6,5	46
- 28 days	8,0	52
Adhesion to concrete at 28 days, EN 1542 (MPa)	≥ 2,0	
Reaction to fire, EN 13501-1 (Euroclass)	A1	
Thickness / Consumption*		
Thickness as pure mortar per application, (mm)	5 - 50	
Consumption as pure mortar per application, (kg/m^2·mm)	1,8	

* These figures are for guidance only and may vary depending on the porosity, texture and condition of the substrate, as well as the application method. Perform a preliminary on-site test to accurately determine the total consumption under specific jobsite conditions.

GUARANTEE

The information contained in this Technical Bulletin is based on our experience and technical knowledge obtained through laboratory testing and bibliographic references. ***DRIZORO® S.A.U.*** reserves the right to make changes without prior notice. Any use of this information beyond the purposes specified herein shall not be our responsibility unless confirmed in writing by the Company. Data concerning consumption, dosage and yields may vary depending on specific jobsite conditions and must be determined at the actual jobsite where the product is to be used, under the client's responsibility. We shall not accept responsibility exceeding the value of the purchased product. For any questions or enquiries, please consult our Technical Department. This version of the Technical Bulletin supersedes the previous one.

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